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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,899	01/04/2007	Takayuki Fukumatsu	1752-0186PUS1	4372

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EXAMINER

GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1794

NOTIFICATION DATE	DELIVERY MODE
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09/03/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/590,899	Applicant(s) FUKUMATSU ET AL.	
	Examiner Dawn Garrett	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office action is responsive to the amendment received June 23, 2009. Claims 1 and 3 were amended. Claim 2 is cancelled. Claim 4 was added. Claims 1, 3 and 4 are pending.
2. The rejection of claims 1 and 3 under 35 U.S.C. 103(a) as being unpatentable over Ise et al. (US 2004/0124769 A1) as set forth in the rejection mailed March 23, 2009 is withdrawn due to the amendment.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 4 recites “wherein the **luminescent layer** emits light **via phosphorescence**” and applicant indicates support may be found in paragraph [0017] of the specification. Paragraph [0017] of the specification sets forth “an organic EL device which utilizes so-called phosphorescence”. Par. 17 does not specifically set forth the luminescent layer emits light via phosphorescence. Also, par. 17 is directed to “so-called phosphorescence” and it is unclear that

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this is the same as emitting light via phosphorescence as specifically recited in claim 4.

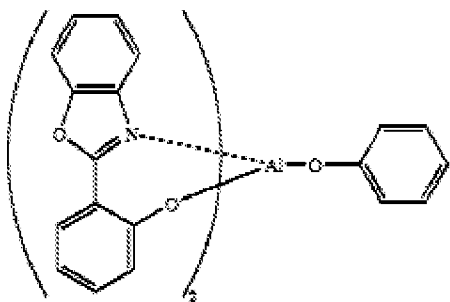
Accordingly, claim 4 is considered to comprise new matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

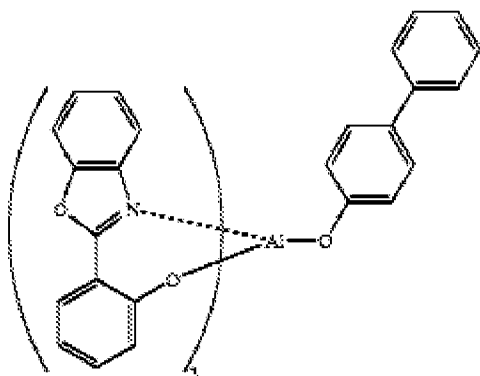
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ise et al. (US 2004/0124769 A1) in view of Takahashi et al. (US 6,048,631). Ise et al. discloses an organic electroluminescent device comprising a light emitting layer comprising at least one metal complex and at least one phosphorescence emitting guest material (see abstract). General metal complex formulas H-5 and H-6 are taught on page 3. More specific examples of aluminum metal complexes include the following (see par. 96):



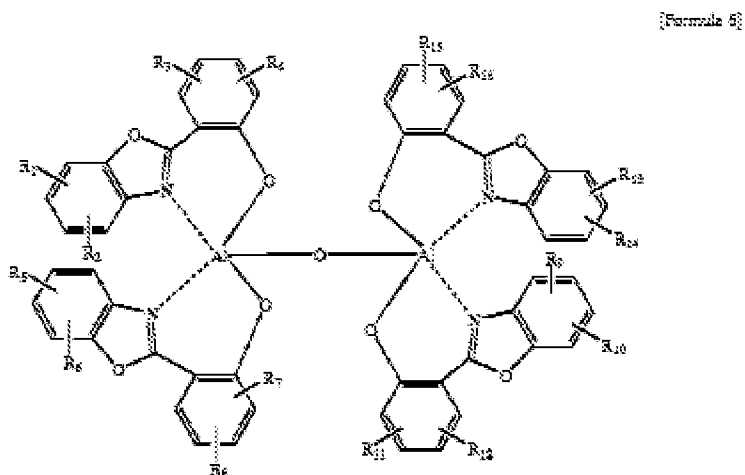
(see page 15)

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(see page 15)

Ise et al. teaches at least one metal complex as host material for a light emitting layer of a light emitting device. Ise et al. teaches specific aluminum complexes on page 15 (shown above) having ligand components corresponding to ligands shown in instant formula III; however, Ise et al. does not *exemplify* an aluminum metal complex identical to instant formula III. Takahashi et al. teaches, in analogous art, an aluminum metal complex for a light emitting layer according to the following:

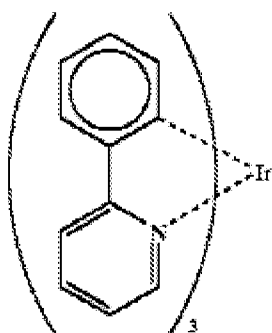


It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected an aluminum metal complex taught by Takahashi et al. as the metal complex for the Ise et al. device light emitting layer, because one would expect a device comprising an

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aluminum complex with ligands the same as ligands specifically taught by Ise et al. to result in a functional device as set forth by Ise et al.

The Ise et al. phosphorescent emitting guest material included in the light emitting layer may comprise a transition metal complex comprising iridium, platinum, rhenium or ruthenium as the metal center (see par. 97-98). Ise et al. exemplifies tri(2-phenylpyridine)iridium complex, "Ir(ppy)₃", as a phosphorescent emitter for the light emitting layer (see page 41, Comparative Example 1 and Example 2)



The Ise et al. light emitting device further comprises a hole transporting layer and electron transporting layer (see par. 151).

Ise et al. teaches preferably no hole-blocking layer is provided between the electron transporting layer and the light emitting layer (see par. 147).

Ise et al. exemplifies tri(2-phenylpyridine)iridium complex, "Ir(ppy)₃", as a phosphorescent guest emitter for the light emitting layer (see page 41, Comparative Example 1 and Example 2).

Response to Arguments

7. Applicant's arguments filed June 23, 2009 have been fully considered but they are not persuasive.

Applicant argues Ise et al. does not “fairly suggest the compound represented by general formula III as a host material”. Applicant further argues secondary reference, Takahashi et al., does not include an organic metal complex as a guest material in the light emitting layer and the secondary reference utilizes fluorescence not phosphorescence. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The examiner submits the primary reference clearly teaches organometallic phosphorescent compounds for light emission. The secondary reference is used to teach specific aluminum complexes, which are taught for use in a light emitting layer of an organic electroluminescent device.

Applicant alleges surprising results and unexpected results at the top of page 6 of the remarks filed June 23, 2009, but it is not seen where applicant has submitted persuasive evidence of the unexpected results commensurate in scope with the claims compared to results commensurate in scope with the closest prior art. Per M.P.E.P. § 2145, the arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geiseler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). Also, where a claimed improvement of a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of

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prior art ready for improvement," the claim is unpatentable under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (citing KSR v. Teleflex, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)). Accordingly, applicant claims a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). Ex Parte Smith, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing KSR, 127 S.Ct. at 1740, 82 USPQ2d at 1396). Accordingly, since the applicant has submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a) because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement.

Applicant further argues with respect to Ise et al. that general formulas H-5 and H-6 encompass millions of compounds. Applicant also argues Ise et al. teaches away from the present invention by teaching specific example compounds 44, 45 and 47. The examiner notes that non-preferred embodiments can be indicative of obviousness (see *In re Lamberti*, 192 USPQ 278 (CCPA 1976); *In re Boe*, 148 USPQ 507 (CCPA 1976); *In re Kohler*, 177 USPQ 399 (CCPA 1973)), and a reference is not limited to working examples (see *In re Fracalossi*, 215 USPQ 569 (CCPA 1982)). Furthermore, the fact that a reference "discloses a multitude of effective combinations does not render any particular formulation less obvious." *Merck & Co.*,

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Inc. v. Biocraft Labs, 874 F.2d 804, 808 (Fed. Cir. 1989) *In re Corkill*, 771 F.2d 1496, 1500 (Fed. Cir. 1985) (obviousness rejection of claims affirmed in light of prior art teaching that “hydrated zeolites will work” in detergent formulations, even though “the inventors selected the zeolites of the claims from among ‘thousands’ of compounds”)); *see also*, *In re Susi*, 440 F.2d 442, 445 (CCPA 1971) (obviousness rejection affirmed where the disclosure of the prior art was “huge, but it undeniably include[d] at least some of the compounds recited in appellant’s generic claims and [was] of a class of chemicals to be used for the same purpose as appellant’s additives.”). Furthermore, “[A] reference disclosure must be evaluated for all that it fairly [teaches] and not only for what is indicated as preferred.” *In re Bozek*, 416 F.2d 1385, 1390 (CCPA 1969).

Applicant further argues the combination of references would result in an unpredictable outcome. The rejection sets forth a rationale for combining the analogous prior art references. The examiner respectfully submits applicant has not provided clear evidence of unexpected results to overcome the obviousness rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dawn Garrett/
Primary Examiner, Art Unit 1794

August 28, 2009